REMARKS

Claims 1, 10 - 11, 33, 34, 43 - 45, 48, 50, 52, and 56 - 57 are pending. Claims 45 and 56 have been amended. Claims 44 and 54 are canceled herein. Claims 2-7, 12-32, 25-42, 47, 49, 51, 53, and 55 were previously canceled. No claims have been added by this amendment. Applicants submit that no new matter is added herein.

Election/Restriction

Responsive to the Examiner's withdrawing claims 44 and 54 as being directed to a non-elected species, those two claims are hereby canceled.

Claim Rejection under 35 USC §112

Claims 45 and 56 stand rejected under 35 USC §112 in view of the claim words 'strong chelating agent". By virtue of the instant Amendment, the objectionable claim words have been deleted, thereby avoiding this rejection of the claims.

Rejections under 35 USC §102

Claims 1, 11, 33, 34, 43, 45, 48, 50, 52, and 56-57 are rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,017,502 to Kaufman, et al. Applicants respectfully traverse this rejection.

The 35 USC §102(a) rejection is untenable since the Kaufman reference was not published until January 25, 2000, whereas the instantly claimed invention has the benefit of a provisional application filing date of June 25, 1999. Accordingly, the Kaufman publication does not pre-date the instant invention as required by 35 USC §102(a).

Further, the rejection under 102(a) and 102(e) is untenable because the reference does not disclose the presently claimed invention.

Kaufman, et al. discloses a solution to the problem of producing pyrithione salt particles in forms other than platelet or spherical form, such as rods, needles, cylinders, cones, ellipsoids, prisms, parallelepipeds, pyramids, cubes and the like. Kaufman, et al. solved this problem

utilizing selected dispersants or a combination of dispersant and surfactants, and a range of flow processing temperatures which promote the formation of non-platelet forms of pyrithione salt particles. (See col. 3, lines 34-43).

In contrast, one aspect of the claimed invention, as recited in claim 1, relates to an antimicrobial composition concentrate including a zinc or copper or silver source and a pyrithione or pyrithione complex. The weight ratio of the zinc or copper or silver source to the pyrithione complex is in the range from 1:300 to 50:1. Other aspects of the present invention recited in other independent claims also focus upon antimicrobial composition concentrates.

Applicants submit that Kaufman, et al. does not disclose or suggest an antimicrobial composition concentrate that has an enhanced biocidal effect against microorganisms. Applicants further submit that the non-platelet forms of pyrithione salt particles disclosed by Kaufman, et al. neither inherently disclose nor suggest an antimicrobial composition concentrate as instantly claimed. While Applicants agree that Kaufman, et al. discloses the combination of a water-soluble salt of pyrithione and a water-soluble salt of a selected polyvalent metal, such as zinc or copper, Applicants respectfully submit that Kaufman, et al. does not suggest using such combination in an antimicrobial composition concentrate. Accordingly, Applicants submit the Examiner is improperly using hindsight to apply Kaufman, et al. to the presently claimed invention. Accordingly, withdrawal of the present rejection is respectfully requested.

Claims 1, 11, 48, are rejected under 35 USC §102(b) as anticipated by, or in the alternative, rendered obvious under 35 USC §103(a) over EP 077630 to Dixon, et al. Applicants respectfully disagree with the Examiner.

Dixon, et al. discloses a topical antimicrobial composition having an aqueous or detergent solution of a pyridinethione salt or pyridinethione disulphide, a strong chelating agent and from 0.007 to 1.5% w/w of divalent copper cations. The specification of Dixon, et al states that the antimicrobial effect of dissolved pyridinethione (pyrithione) in topical antimicrobial formulations is enhanced by including a strong chelating agent and divalent copper cations in the formulation.

Claim 1 of the present application is directed to an antimicrobial composition concentrate which includes pyrithione or a pyrithione complex, a zinc or copper or silver source, where the weight ratio of the zinc or copper or silver source to the pyrithione or pyrithione complex is in the range of from 1:300 to 50:1. Applicants submit Dixon, et al. neither discloses nor suggests mentions the weight ratio of a metal source to the pyridinethione source. Accordingly, Applicants submit that Dixon, et al. neither anticipates nor renders obvious claim 1, or any claims dependent therefrom.

Claim 44, and likewise, claim 54, are directed to an antimicrobial composition that includes a silver source. Dixon, et al. does not disclose or suggest an antimicrobial composition that includes a silver source. In contrast, Dixon, et al. discloses the use of soluble pyridinethione salts, such as sodium pyridinethione, as well as insoluble pyridinethione salts, such as zinc pyrithione. The examples recited in Dixon, et al. do not show or suggest the use of any pyridinethione besides zinc pyrithione or sodium pyrithione. Applicants submit that one of ordinary skill in the art, taking Dixon as a whole, would not substitute silver for zinc or sodium. Accordingly, Dixon, et al. does not disclose or suggest the antimicrobial composition concentrate recited in claim 44 or 54.

Claims 1, 10, 11, 45, 46 are rejected under USC 102(b) as being anticipated by Nagata – JP 134227.

Claims 1, 10, 11, 33, 34, 43, 48, 50, 52, 57 are rejected under 35 USC 102(b) as anticipated by or, or in alternative, under 35 USC 103(a) as obvious over Wiese et al 5227156.

Rejections under 35 USC §103

Claims 1, 10, 11, 33, 34, 43, 48, 50, 52, 57 are rejected under 35 USC 103(a) as being unpatentable over Kappock et al 5518774.

Kappock, et al. discloses pyrithione-containing coating compositions exhibiting a combination of in-can preservation against microbial attack plus antimicrobial efficacy of the dry film resulting from the use of the coating composition on a substrate. One embodiment of the coating composition disclosed by Kappock, et al. requires a base medium, such as a polymer latex. As previously noted by Applicants, Kappock, et al. generally discloses a zinc compound-containing and pyrithione salt-containing compound having a molar range of ratios of pyrithione salt to zinc compound between about 1:10 and about 10:1. (See col. 3, lines 12-20). However, Kappock, et al. does not disclose the instantly claimed weight ratios.

In contrast to Kappock, et al. claims 1, 10, 11, 48 and 57 of the present application are directed to an antimicrobial composition concentrate which includes pyrithione or a pyrithione complex, a zinc or copper or silver source, where the weight ratio of the zinc or copper or silver source to the pyrithione or pyrithione complex is in the range of from 1:300 to 50:1. The antimicrobial concentrates can be diluted in a working fluid as recited in claim 1 and discussed in more detail on pages 27-28 of the present specification. Such working fluids include fuels, metal working fluids, engine fluids, paints, coatings, and the like. Applicants submit the coating compositions disclosed in Kappock, et al. do not teach or suggest the antimicrobial composition concentrate of the present invention. Furthermore, the Applicants submit the Example 1 of Kappock, et al. would not teach or suggest to one of ordinary skill in the art how to make the antimicrobial composition concentrate of the present invention since Example 1 shows a procedure to make Acrylic Latex Paint preparation of the Latex using a mill base, pigment grind and let down. Likewise, Example 2 of Kappock, et al. would not teach or suggest to one of ordinary skill in the art how to make the antimicrobial composition concentrate of the present invention since Example 2 shows sodium pyrithione efficacy as an "in-can" preservative. Since this reference teaches neither an antimicrobial composition concentrate nor suggests making or using an antimicrobial composition concentrate using the aqueous coating composition disclosed therein, Applicants submit the present rejection as applied to claims 1, 10, 11, 48 and 57 has been overcome and respectfully request the Examiner to withdraw the rejection.

Claims 33 and 34 are directed to an antimicrobial composition concentrate that includes a salt of pyrithione and a water soluble zinc metal salt, where the weight ration of the water-

soluble zinc metal salt to the salt of pyrithione is in the range from 1:100 to 1:10. As discussed in more detail above, Kappock, et al. discloses an aqueous coating composition that contains a zinc compound and a pyrithione salt. In one embodiment of the coating composition disclosed in Kappock, et al., the coating composition contains a base medium, such as a polymer latex. Since this reference teaches neither an antimicrobial composition concentrate nor suggests making or using an antimicrobial composition concentrate using the aqueous coating composition disclosed therein, Applicants submit the present rejection as applied to claims 33 and 34 of the present invention. Accordingly, Applicants respectfully request the Examiner withdraw the current rejection.

Likewise, claim 43 is directed to an antimicrobial composition concentrate that includes pyrithione or a pyrithione complex, and zinc from a zinc source wherein the weight ratio of the zinc source to the pyrithione or pyrithione complex is in the range from 50:1 to 1:50. The claimed antimicrobial composition concentrate has an enhanced biocidal effect against microorganisms. Kappock, et al. neither discloses or suggests the claimed weight ratio nor teaches an antimicrobial composition concentrate nor suggests making or using an antimicrobial composition concentrate using the aqueous coating composition disclosed therein, Applicants submit the present rejection as applied to claim 43.

Claim 50 is directed to an antimicrobial composition concentrate which includes a salt of pyrithione and a water soluble zinc metal salt, where the weight ratio of the water-soluble zinc metal salt to the salt of pyrithione is in the rang from 50:1 to 1:50. The antimicrobial composition recited in claim 50 is diluted in a working fluid at a dilution ratio of the concentrate to the working fluid of between about 1:10 and about 1:100. Furthermore, the antimicrobial composition concentrate additionally includes water or an organic solvent, such as alkanolamine.

Kappock, et al. has been discussed in more detail above. Applicants submit that Kappock, et al. does not disclose or suggest the weight ratios recited in claim 50, nor does Kappock, et al. disclose or suggest the addition of water or an organic solvent to an antimicrobial composition concentrate. While Applicants agree that Kappock, et al. generally discloses adding sodium pyrithione, zinc oxide, water, and other compounds to form a paint, Kappock, et al. does

not discloses the addition of an antimicrobial composition concentrate having the components and weight ratios claimed herein to a working fluid. Accordingly, Applicants submit this rejection has been overcome and respectfully request the Examiner withdraw the rejection.

Claim 52 is directed to an antimicrobial composition concentrate which contains a pyrithione or a pyrithione complex and a zinc source where the weight ration of the zinc source to the pyrithione or pyrithione complex is in the range from 50:1 to 1:50. The antimicrobial composition concentrate additionally includes water or an organic solvent, such as alkanolamine.

Kappock, et al. has been discussed in more detail above. Applicants submit that Kappock, et al. does not disclose or suggest the weight ratios recited in claim 52, nor does Kappock, et al. disclose or suggest the addition of water or an organic solvent such as alkanolamine. Applicants further submit that it would not be obvious to one of ordinary skill in the art to add the organic solvent to the coating composition of Kappock, et al. to make the antimicrobial composition concentrate of the claimed invention. Accordingly, Applicants submit this rejection should be withdrawn.

Accordingly, Applicants submit that none of the references, alone or in combination, anticipate or make obvious the invention as presently claimed and that the application is now in condition for allowance. Therefore, Applicants respectfully request reconsideration and further examination of the application and the Examiner is respectfully requested to take such proper actions so that a patent will issue herefrom as soon as possible.

Additional 35 USC §102(b) or, in the alternative, 35 USC §103(a) rejections

Claims 33, 34, 43, 46, 48, 50, 52, 54 and 57 stand rejected under 35 USC 102(b) as allegedly anticipated by Wiese. However, Wiese does not disclose or suggest any antimicrobial concentrates, much less the instantly claimed dilution range. Further, the Abstract of Wiese speaks to the requirement for, and activity of, a thiazolinone preservative. Accordingly, Wiese does not disclose or suggest a composition that is free of that preservative as claimed in instant claim 45. Accordingly, the rejection is untenable and should be withdrawn.

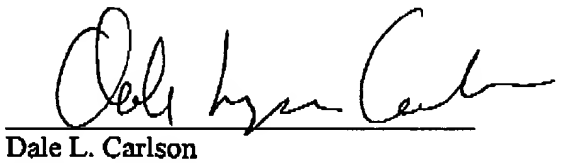
Claims 1, 10, 11, 45-46 are rejected under 35 U.S.C. 102(b) over Nagata. The reference discloses aqueous and crown ether antimicrobial compositions. It does not disclose or suggest

concentrates in the context of the instantly claimed range of dilution ratios and does not disclose or suggest diluting down any concentrate to with the range of amounts of zinc and zinc pyrithione disclosed in that reference. Accordingly, this rejection is untenable and should be withdrawn.

Reconsideration of the claims as amended, and an early allowance thereof, is respectfully requested. If the Examiner has any questions or believes that a discussion with Applicants' attorney would expedite prosecution, the Examiner is invited and encouraged to contact the undersigned at the telephone number below.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

Respectfully submitted,
John D. Nelson, Jr., et al.



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